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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/591,683   | 09/05/2006  | Young SEO            | 1-36919             | 1478             |
| 43935 7590 09/02/2010<br>FRASER CLEMENS MARTIN & MILLER LLC<br>28366 KENSINGTON LANE<br>PERRYSBURG, OH 43551 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| SULLIVAN, DEBRA M  |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
| 3725   |             |                      |                     |                  |
| NOTIFICATION DATE  |             | DELIVERY MODE        |                     |                  |
| 09/02/2010   |             | ELECTRONIC           |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/591,683

**Applicant(s)**

SEO, YOUNG

**Examiner**

DEBRA M. SULLIVAN

**Art Unit**

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 6, 7 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hahn et al (UA 5,357,779). In reference to claim 1, Hahn et al discloses an apparatus for forming an article from a blank of sheet metal comprising of a first die (20) having a cavity formed therein, a second die member (30), means for imparting relative reciprocal movement (42) between the first die member (20) and the second die member (30) to deform the blank of sheet metal within the cavity of the first die member (20) [see col. 5 lines 48-58], means for producing a magnetic field (440, 442) to exert magnetic restraining forces [it is noted that the examiner is interpreting the limitation magnetic restraining forces to be a restraining force that is pertaining to a magnet; therefore because the restraining forces that are applied to the blank of sheet metal are associated with a magnet the magnetic restraining forces limitation is met] on the blank of sheet metal (532) to selectively restrain relative movement between the blank of sheet metal (532) and the first die member (20) during the deformation of the blank of sheet metal, and means for controlling the strength (130) of the magnetic field to vary the magnetic restraining forces during the deformation of the blank of sheet metal (532) [see col. 14 lines 4-9, 27-30 & 49-52].

In reference to claim 2, Hahn et al further discloses the means for producing a magnetic field includes a plurality of electromagnets (440, 442).

In reference to claim 3, Hahn et al further discloses the cavity includes an open end (538), as seen in figure 12.

In reference to claim 6, Hahn et al discloses the electromagnets (440, 442) are disposed in spaced relation about the open end of the cavity (538) of the first die member (20), as seen in figure 12.

***Allowable Subject Matter***

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Hahn et al discloses controlling the strength to vary the magnetic restraining forces and to provide the same restraining forces at selected locations of the blank of sheet metal. The prior art fails to disclose the means for controlling the strength of the magnetic field including a microprocessor for controlling the strength of the magnetic field produced by each electromagnet to provide different restraining forces at selected locations of the blank of sheet metal.

It is the opinion of the examiner that the art of record (considered as a whole) neither anticipates nor renders obvious “disposing a plurality of electromagnets spaced about the cavity in the first die member to exert magnetic restraining forces on the blank of sheet metal for selectively restraining relative movement between the blank of sheet metal and the first die member;...varying the magnetic field of the electromagnets to provide selected magnetic restraining forces from each of the electromagnets during the deformation of the blank of sheet metal” in combination with the rest of the claimed limitations set forth in claim 11.

Hahn et al (US 5,357,779) discloses a method for forming an article wherein a plurality of electromagnets (440, 442) are used to exert magnetic restraining forces on a blank of sheet metal (532) for selectively restraining relative movement between the blank of sheet metal (532) and a first die member (20) by varying the magnetic field of the electromagnets to provide selected magnetic restraining forces from each of the electromagnets (440, 442) during the deformation of the blank of sheet metal (532) [see col. 13 lines 49-55, 63-65 & col. 14 lines 4-9, 27-30, 49-52].

Thoms et al (US 5,377,520) discloses a method for forming an article from a blank of sheet metal (8) wherein a plurality of electromagnets (23) are disposed spaced about a cavity in a first die member (7') [see FIG 5] to exert magnetic restraining forces on the blank of sheet metal until the blank of sheet metal (8) is clamped between the first die member (7') and an upper drawing frame (21') [see col. 6 lines 16-20].

No motivation is found to modify the method of Hahn et al with the teaching of Thoms et al to dispose electromagnets in a spaced relation about a cavity of a first die member, because such a modification would destroy the intended function of the electromagnets of Hahn et al. The electromagnets of Hahn et al control the movement of a redraw sleeve therefore modifying the placement of the electromagnets to be spaced about the cavity in the first die member would prevent the electromagnets from controlling the actuation of the redraw sleeve. In addition, there is no motivation to modify the method of Thoms et al with the teaching of Hahn et al to vary the magnetic field of the electromagnets to provide selected magnetic restraining forces from each of the electromagnets during the deformation of the blank of sheet metal because the electromagnets of Thoms et al are deactivated once the blank of sheet metal is clamped between

the first die member and the upper drawing frame and the relative movement between the blank of sheet metal and the first die member is controlled by the clamping pressure exerted on the blank of sheet metal by the upper clamping frame and first die member. Claim 11 is allowed.

***Response to Arguments***

Applicant's arguments, see pages 6-8, filed May 3, 2010, with respect to the rejection(s) of claim(s) 1-3,6,7 and 11 under 35 U.S.C. 103 have been fully considered and are persuasive. Specifically the amendments directed to the means for controlling the strength of the magnetic field overcomes the previous rejection of Thoms et al in view of Hahn et al. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hahn et al under 35 U.S.C. 102.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra Sullivan whose telephone number is (571) 272-1904. The examiner can normally be reached Monday - Friday 8am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached at (571) 272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Debra M Sullivan/  
Examiner, Art Unit 3725